

WHAT IS CLAIMED IS

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1. A Web page creation apparatus comprising:

a Web page creation unit creating a Web page having
operation items, the Web page creation unit creating the Web page
based on operation-item display information, which is defined for a
10 device where the Web page is displayed or a user of the device to
indicate whether the displaying of each operation item is needed, so
that some of the operation items the displaying of which is needed
are displayed.

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2. The Web page creation apparatus according to claim 1
wherein the Web page creation unit comprises:

20 an operation-item style information creation unit
creating first style information for each of the operation items the
displaying of which is needed, based on the operation-item display
information; and

an operation-item creation unit creating the operation
25 items in the Web page according to the first style information

created by the operation-item style information creation unit.

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3. The Web page creation apparatus according to claim 2 wherein the operation-item style information creation unit is provided to create the first style information by making reference to the operation-item display information.

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4. The Web page creation apparatus according to claim 2 wherein the first style information is a data of XSL format.

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5. The Web page creation apparatus according to claim 2 further comprising a second style information management unit managing second style information for all the operation items that can be displayed in the Web page, wherein the operation-item style information creation unit is provided to create the first style information by extracting style information corresponding to each of

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the operation items the displaying of which is needed by the operation-item display information, from the second style information managed by the second style information management unit.

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6. The Web page creation apparatus according to claim 5
10 wherein the second style information is a data of XSL format.

15 7. The Web page creation apparatus according to claim 5
wherein the operation-item style information creation unit comprises a third style information creation unit creating third style information, which is used to extract the style information
corresponding to each of the operation items the displaying of which
20 is needed by the operation-item display information, from the second style information, and the operation-item style information creation unit is provided to create the first style information by applying the third style information, created by the third style information creation unit, to the second style information.

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8. The Web page creation apparatus according to claim 7 wherein the third style information is a data of XSL format.

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9. The Web page creation apparatus according to claim 2 further comprising a processing identification data management unit managing processing identification information for identifying processing to be performed when one of the operation items is chosen, wherein the operation-item creation unit is provided to create each of the operation items by applying the first style information to the processing identification information managed by the processing identification data management unit, so that the processing identified by the processing identification information corresponding to the chosen operation item is performed.

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10. The Web page creation apparatus according to claim 1 further comprising:

a request receiving unit receiving a request of acquisition of the Web page from the device and causing the Web page creation unit to create the Web page based on the request of

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acquisition of the Web page; and

a Web page transmitting unit transmitting the Web page,
created by the Web page creation unit, to the device.

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11. A Web page creation apparatus comprising:

a Web page creation unit creating a Web page having
10 operation items corresponding to functions of an external device;
and

an inquiry unit transmitting an inquiry about usable
functions of the external device to the external device,

wherein the Web page creation unit creates the Web
15 page based on both operation-item display information, which is
defined for a device where the Web page is displayed or a user of
the device to indicate whether displaying of each operation item is
needed, and usable function identification information, which is
received from the external device in response to the inquiry of the
20 inquiry unit and indicates the usable functions of the external device,
so that the operation items corresponding to the usable functions of
the external device are displayed.

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12. The Web page creation apparatus according to claim
11 wherein the Web page creation unit is provided to create the Web
page so that the operation items corresponding to the usable
functions of the external device indicated by the usable function
5 identification information, among the operation items the displaying
of which is needed by the operation-item display information, are
displayed.

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13. The Web page creation apparatus according to claim
11 wherein the Web page creation unit comprises:

an operation-item style information creation unit
15 creating first style information for each of the operation items the
displaying of which is needed, based on the operation-item display
information; and

an operation-item creation unit creating the operation
items in the Web page by applying the first style information created
20 by the operation-item style information creation unit, to the usable
function identification information.

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14. The Web page creation apparatus according to claim
13 wherein the operation-item style information creation unit is
provided to create the first style information by making reference to
the operation-item display information.

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15. The Web page creation apparatus according to claim
10 13 wherein the first style information is a data of XSL format.

15 16. The Web page creation apparatus according to claim
13 further comprising a second style information management unit
managing second style information for all the operation items that
can be displayed in the Web page, wherein the operation-item style
information creation unit is provided to create the first style
20 information by extracting style information corresponding to each of
the operation items the displaying of which is needed by the
operation-item display information, from the second style
information managed by the second style information management
unit.

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17. The Web page creation apparatus according to claim
16 wherein the second style information is a data of XSL format.

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18. The Web page creation apparatus according to claim
16 wherein the operation-item style information creation unit
comprises a third style information creation unit creating third style
10 information, which is used to extract the style information
corresponding to each of the operation items the displaying of which
is needed by the operation-item display information, from the second
style information, and the operation-item style information creation
unit is provided to create the first style information by applying the
15 third style information, created by the third style information
creation unit, to the second style information.

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19. The Web page creation apparatus according to claim
18 wherein the third style information is a data of XSL format.

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20. The Web page creation apparatus according to claim
13 wherein the operation-item creation unit is provided to create
each of the operation items by applying the first style information to
the usable function identification information, so that processing,
5 concerning the function identified by the usable function
identification information corresponding to the operation item
concerned, is performed when one of the operation items is chosen.

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21. The Web page creation apparatus according to claim
11 further comprising:

a request receiving unit receiving a request of
15 acquisition of the Web page from the device and causing the Web
page creation unit to create the Web page based on the request of
acquisition of the Web page; and

a Web page transmitting unit transmitting the Web page,
created by the Web page creation unit, to the device.

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22. The Web page creation apparatus according to claim
25 11 wherein the inquiry unit is provided to transmit the inquiry about

the usable functions to the external device in accordance with SOAP.

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23. A Web page creation apparatus comprising:

a Web page creation unit creating a Web page having
operation items corresponding to functions of different external
devices respectively; and

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a permitted-function inquiry unit transmitting an inquiry
about allowability of execution of a corresponding one of the
functions for one of the operation items, to each of the external
devices,

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wherein the Web page creation unit creates the Web
page based on both operation-item display information, which is
defined for a device where the Web page is displayed or a user of
the device to indicate whether displaying of each operation item is
needed, and permitted-function identification information, which is
received from the external devices in response to the inquiry of the
permitted-function inquiry unit and indicates the allowability of
execution of each of the functions, so that the operation items
corresponding to the permitted functions of the external devices are
displayed.

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24. The Web page creation apparatus according to claim
23 wherein the Web page creation unit is provided to create the Web
page so that the operation items corresponding to the permitted
functions of the external devices indicated by the permitted-function
5 identification information, among the operation items the displaying
of which is needed by the operation-item display information, are
displayed.

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25. The Web page creation apparatus according to claim
23 wherein the Web page creation unit comprises:

an operation-item style information creation unit
15 creating first style information for each of the operation items the
displaying of which is needed, based on the operation-item display
information; and

an operation-item creation unit creating the operation
items in the Web page by applying the first style information created
20 by the operation-item style information creation unit, to the
permitted-function identification information.

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26. The Web page creation apparatus according to claim
25 wherein the operation-item style information creation unit is
provided to create the first style information by making reference to
the operation-item display information.

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27. The Web page creation apparatus according to claim
10 25 wherein the first style information is a data of XSL format.

15 28. The Web page creation apparatus according to claim
25 further comprising a second style information management unit
managing second style information for all the operation items that
can be displayed in the Web page, wherein the operation-item style
information creation unit is provided to create the first style
20 information by extracting style information corresponding to each of
the operation items the displaying of which is needed by the
operation-item display information, from the second style
information managed by the second style information management
unit.

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29. The Web page creation apparatus according to claim
28 wherein the second style information is a data of XSL format.

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30. The Web page creation apparatus according to claim
28 wherein the operation-item style information creation unit
comprises a third style information creation unit creating third style
10 information, which is used to extract the style information
corresponding to each of the operation items the displaying of which
is needed by the operation-item display information, from the second
style information, and the operation-item style information creation
unit is provided to create the first style information by applying the
15 third style information, created by the third style information
creation unit, to the second style information.

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31. The Web page creation apparatus according to claim
30 wherein the third style information is a data of XSL format.

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32. The Web page creation apparatus according to claim
25 further comprising a function identification data management unit
managing function identification information for identifying a
corresponding one of the functions for one of the operation items
5 wherein the operation-item creation unit is provided to create each
of the operation items by applying the first style information to the
function identification information, so that, when one of the
operation items is chosen, processing concerning the function
identified by the function identification information corresponding
10 to the chosen operation item is performed.

15 33. The Web page creation apparatus according to claim
32 wherein the Web page creation unit is provided to create
extraction function identification information by extracting the
function identification information, corresponding to the functions
the allowability of execution of which is indicated by the permitted-
20 function identification information, from the function identification
data management unit, and the operation-item creation unit creates
the operation items by applying the first style information to the
extraction function identification information.

34. The Web page creation apparatus according to claim
32 wherein the function identification data management unit further
manages external-device identification information which identifies
one of the external devices used as a location to which the inquiry
5 about the allowability of execution of the corresponding function for
one of the operation items is transmitted, and the permitted-function
inquiry unit determines said one of the external devices based on the
external-device identification information.

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35. The Web page creation apparatus according to claim
23 further comprising:

15 a request receiving unit receiving a request of
acquisition of the Web page from a device and causing the Web page
creation unit to create the Web page based on the request of
acquisition of the Web page; and

a Web page transmitting unit transmitting the Web page,
20 created by the Web page creation unit, to the device.

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36. The Web page creation apparatus according to claim

23 wherein the permitted-function inquiry unit is provided to
transmit the inquiry about the allowability of execution of the
corresponding function for one of the operation items to each
external device in accordance with SOAP.

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37. A method of controlling Web page creation in a Web
10 page creation apparatus which creates a Web page having operation
items, comprising steps of:

creating first style information for each of the operation
items displaying of which is needed, based on operation-item display
information which is defined for a device on which the Web page is
15 displayed or a user of the device to indicate whether the displaying
of each operation item is needed; and

creating the operation items in the Web page according
to the first style information created in the first creating step, so
that some of the operation items the displaying of which is needed
20 are displayed.

25 38. The method according to claim 37 wherein the first

creating step is provided to create the first style information by
extracting style information corresponding to each of the operation
items the displaying of which is needed by the operation-item
display information, from second style information for all the
5 operation items that can be displayed in the Web page.

10 39. The method according to claim 38 wherein the first
creating step includes a step of creating third style information,
which is used to extract the style information corresponding to each
of the operation items the displaying of which is needed by the
operation-item display information, from the second style
15 information, and the first creating step is provided to create the first
style information by applying the third style information created in
the third creating step, to the second style information.

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40. The method according to claim 37 wherein the
second creating step is provided to create each of the operation
items by applying the first style information to processing
25 identification information for identifying processing to be performed

when one of the operation items is chosen, so that the processing identified by the processing identification information corresponding to the chosen operation item is performed.

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41. A method of controlling Web page creation in a Web page creation apparatus which creates a Web page having operation items corresponding to functions of an external device, comprising steps of:

transmitting an inquiry about usable functions of the external device to the external device,

creating the Web page based on both operation-item display information, which is defined for a device where the Web page is displayed or a user of the device to indicate whether displaying of each operation item is needed, and usable function identification information, which is received from the external device in response to the inquiry and indicates the usable functions of the external device, so that the operation items corresponding to the usable functions of the external device are displayed.

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42. The method according to claim 41 wherein the
creating step includes:

creating first style information for each of the operation
items the displaying of which is needed, based on the operation-item
5 display information; and

creating the operation items in the Web page by
applying the first style information created in the first style
information creating step, to the usable function identification
information.

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43. The method according to claim 42 wherein the first
15 style information creating step is provided to create the first style
information by extracting style information corresponding to each of
the operation items the displaying of which is needed by the
operation-item display information, from second style information
for all the operation items that can be displayed in the Web page.

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44. The method according to claim 43 wherein the first
25 style information creating step is provided to create the first style

information by applying third style information, which is used to
extract the style information corresponding to each of the operation
items the displaying of which is needed by the operation-item
display information, from the second style information, to the
5 second style information.

10 45. A method of controlling Web page creation in a Web
page creation apparatus which creates a Web page having operation
items corresponding to functions of different external devices
respectively, comprising steps of:
transmitting an inquiry about allowability of execution
15 of a corresponding one of the functions for one of the operation
items, to each of the external devices; and
creating the Web page based on both operation-item
display information, which is defined for a device where the Web
page is displayed or a user of the device to indicate whether
20 displaying of each operation item is needed, and permitted-function
identification information, which is received from the external
devices in response to the inquiry and indicates the allowability of
execution of each of the functions, so that the operation items
corresponding to the permitted functions of the external devices are
25 displayed.

46. The method according to claim 45 wherein the Web page creating step includes:

creating first style information for each of the operation items the displaying of which is needed, based on the operation-item display information; and

creating the operation items in the Web page by applying the created first style information to the permitted-function identification information.

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47. The method according to claim 46 wherein the first style information is created by extracting style information corresponding to each of the operation items the displaying of which is needed by the operation-item display information, from second style information for all the operation items that can be displayed in the Web page.

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48. The method according to claim 47 wherein the operation-item creating step includes creating third style information, which is used to extract the style information corresponding to each

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of the operation items the displaying of which is needed by the
operation-item display information, from the second style
information, and the operation-item creating step is provided to
create the first style information by applying the created third style
5 information to the second style information.

10 49. The method according to claim 46 wherein each of
the operation items is created by applying the first style information
to function identification information for identifying a
corresponding one of the functions for one of the operation items, so
that, when one of the operation items is chosen, processing
15 concerning the function identified by the function identification
information corresponding to the chosen operation item is performed.

20 50. The method according to claim 49 wherein
extraction function identification information is created by
extracting the function identification information, corresponding to
the functions the allowability of execution of which is indicated by
25 the permitted-function identification information, from the function

identification information, and the operation items are created by applying the first style information to the extraction function identification information.

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51. A computer program product embodied therein to cause a computer to execute a Web page creation method which creates a Web page having operation items, the method comprising steps of:

creating first style information for each of the operation items displaying of which is needed, based on operation-item display information which is defined for a device on which the Web page is displayed or a user of the device to indicate whether the displaying of each operation item is needed; and

creating the operation items in the Web page according to the first style information created in the first creating step, so that some of the operation items the displaying of which is needed are displayed.

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52. The computer program product according to claim

51 wherein the first creating step is provided to create the first style
information by extracting style information corresponding to each of
the operation items the displaying of which is needed by the
operation-item display information, from second style information
5 for all the operation items that can be displayed in the Web page.

10 53. A computer program product embodied therein to
cause a computer to execute a Web page creation method which
creates a Web page having operation items corresponding to
functions of an external device, the method comprising steps of:
 transmitting an inquiry about usable functions of the
15 external device to the external device; and
 creating the Web page based on both operation-item
display information, which is defined for a device where the Web
page is displayed or a user of the device to indicate whether
displaying of each operation item is needed, and usable function
20 identification information, which is received from the external
device in response to the inquiry and indicates the usable functions
of the external device, so that the operation items corresponding to
the usable functions of the external device are displayed.

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54. The computer program product according to claim
53 wherein the creating step includes:

creating first style information for each of the operation
items the displaying of which is needed, based on the operation-item
5 display information; and

creating the operation items in the Web page by
applying the first style information created in the first style
information creating step, to the usable function identification
information.

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55. A computer program product embodied therein to
15 cause a computer to execute a Web page creation method which
creates a Web page having operation items corresponding functions
of different external devices respectively, the method comprising
steps of:

transmitting an inquiry about allowability of execution
20 of a corresponding one of the functions for one of the operation
items, to each of the external devices; and

creating the Web page based on both operation-item
display information, which is defined for a device where the Web
page is displayed or a user of the device to indicate whether
25 displaying of each operation item is needed, and permitted-function

identification information, which is received from the external devices in response to the inquiry and indicates the allowability of execution of each of the functions, so that the operation items corresponding to the permitted functions of the external devices are
5 displayed.

10 56. The computer program product according to claim
55 wherein the Web page creating step includes:
 creating first style information for each of the operation
items the displaying of which is needed, based on the operation-item
display information; and
15 creating the operation items in the Web page by
applying the created first style information to the permitted-function
identification information.

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 57. An information processing device including a built-
in communication device which communicates with an external
device connected via a network, comprising:
25 a Web page creation unit creating a Web page having

operation items corresponding to functions of the external device;
and

a display unit displaying the Web page created by the
Web page creation unit,

5 wherein the Web page creation unit creates the Web
page based on both operation-item display information, which is
defined for a device where the Web page is displayed or a user of
the device to indicate whether displaying of each operation item is
needed, and usable function identification information, which is
10 received from the external device in response to an inquiry from the
communication device and indicates the usable functions of the
external device, so that the operation items corresponding to the
usable functions of the external device are displayed.

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58. An information processing device including a built-
in communication device which communicates with a plurality of
20 external devices connected via a network, comprising:

a Web page creation unit creating a Web page having
operation items corresponding to functions of the external devices
respectively; and

a display unit displaying the Web page created by the
25 Web page creation unit,

wherein the Web page creation unit creates the Web page based on both operation-item display information, which is defined for a device where the Web page is displayed or a user of the device to indicate whether displaying of each operation item is needed, and permitted-function identification information, which is received from the external devices in response to an inquiry from the communication device and indicates the allowability of execution of each of the functions, so that the operation items corresponding to the permitted functions of the external devices are displayed.

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59. A Web page creation apparatus comprising:

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a Web page creation unit creating a Web page;

a first storage unit managing common information which is defined in common for two or more users to indicate operation items being displayed in the Web page;

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a second storage unit managing individual information which is defined for each user to indicate operation items the displaying of which is unneeded, among all the operation items defined in the common information,

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wherein the Web page creation unit is provided to create the Web page so that the operation items, extracted from all the operation items of the common information based on the individual

information are displayed.

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